



National Aeronautics and  
Space Administration  
Goddard Space Flight Center

DIRECTIVE NO. GMI 1040.6  
EFFECTIVE DATE Oct. 6, 1995  
EXPIRATION DATE \_\_\_\_\_

# DIRECTIVE INFORMATION SHEET

**TITLE:** GSFC EMERGENCY MANAGEMENT PLAN (Greenbelt)

## PURPOSE

This purpose of this plan is to manage the effects of an emergency on the mission and resources and NASA and GSFC/Greenbelt. This Plan seeks to mitigate the effects of a hazard, to prepare measures to be taken which will preserve life and minimize damage, to respond during emergencies, and to establish a recovery system to return the Center to normal operations.

This plan establishes the operating structure for managing an emergency at GSFC/Greenbelt. This is accomplished by responding GSFC organizations to coordinate the use of internal and external resources.

This plan implements the requirements of NMI 1040.3, "Emergency Preparedness Program" and GMI 1040.5, "GSFC Emergency Preparedness Program."

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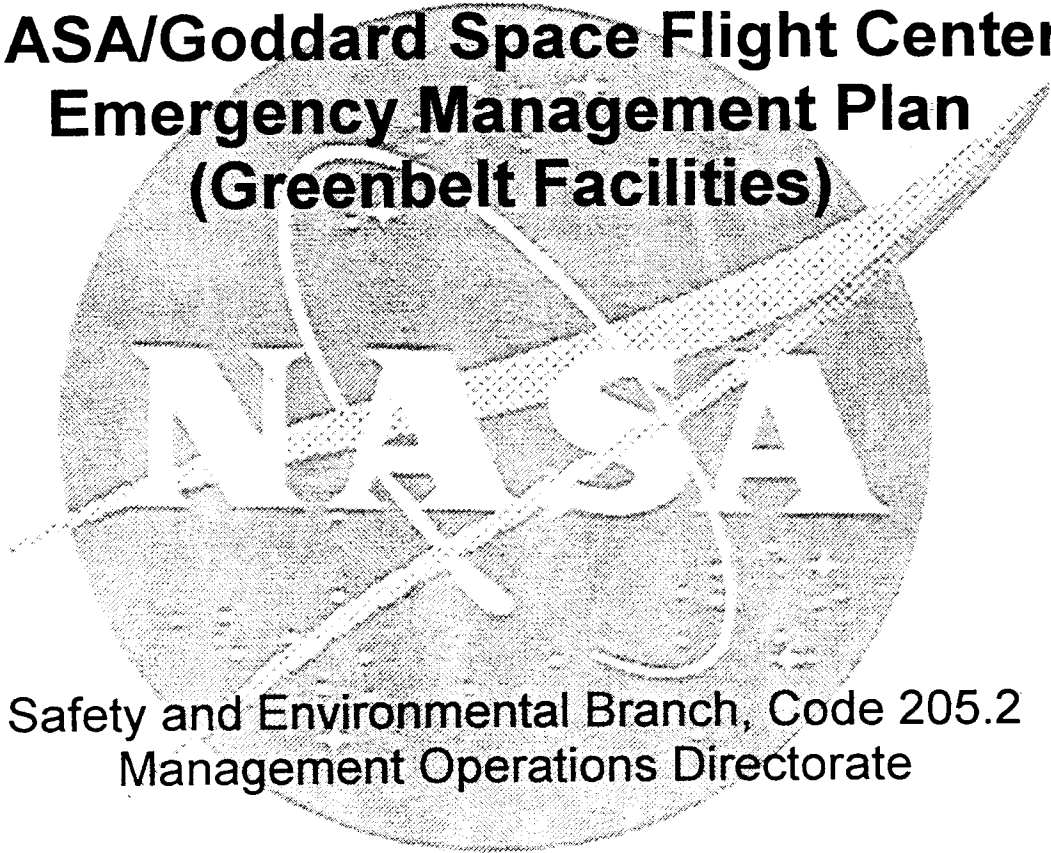
in short, all elements-at-risk -- are susceptible to injury,  
damage, disruption, or loss of life. (\*)

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# **NASA/Goddard Space Flight Center Emergency Management Plan (Greenbelt Facilities)**



**Safety and Environmental Branch, Code 205.2  
Management Operations Directorate**

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EOC, or interim EOC, and simulates the use of outside activity and resources.

- 3) Full-Scale Exercise: A full-scale exercise is intended to evaluate the operational capability of emergency management systems in an interactive manner over a substantial period of time. It involves the testing of a major portion of the basic elements existing within emergency operating plans and organizations in a stress environment. This type of exercise includes the mobilization of personnel and resources and the actual movement of emergency workers, equipment, and resources required to demonstrate coordination and response capability. (\*)

- (j) FEMA - Federal Emergency Management Agency: The Federal point of contact for emergency management programs in both peace and war. FEMA works directly with State and local governments, along with private industry and volunteer organizations in the entire emergency management community to lessen the potential effects of disasters and to increase emergency response programs. (QS-EPP-95-001)

- (k) Hazard: A situation which may result in death or injury to persons or in damage to property; includes effects of toxicity, fire, explosion, shock, concussion, fragmentation, and corrosion. (\*)

- (l) Hazard Analysis:

- 1) In the context of hazardous or critical operations, a process to identify, evaluate, track, and control hazards which could potentially cause:
  - a) Loss of life and/or serious injury;
  - b) Serious damage to facilities and/or equipment; or
  - c) Failures with serious adverse impact on mission capability, mission operability.
- 2) In the context of HAZMAT planning, use of simplified vapor dispersion model which looks at the movement of toxic or explosive vapors over distance at a concentration level of concern to determine whether

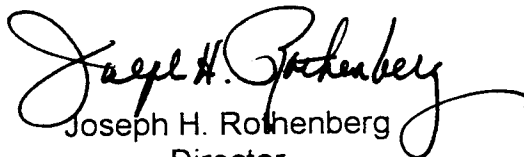
## EMERGENCY MANAGEMENT PLAN

Prepared by



Emergency Preparedness Coordinator  
Safety, Environmental, and Security Office

APPROVED BY



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Director

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GODDARD SPACE FLIGHT CENTER

Greenbelt, MD 20771

September 1995

(4) **Definition of Terms**

Many of the terms listed below are defined in the following documents:

- "Robert T. Stafford Disaster Relief and Emergency Assistance Act" (P.L. 93-288, 42 USC 5173)
- 44 CFR 205, "Federal Disaster Assistance"
- NMI 1040.3, "Emergency Preparedness Program"
- QS-EPP-95-001, "NASA Emergency Preparedness Plan"

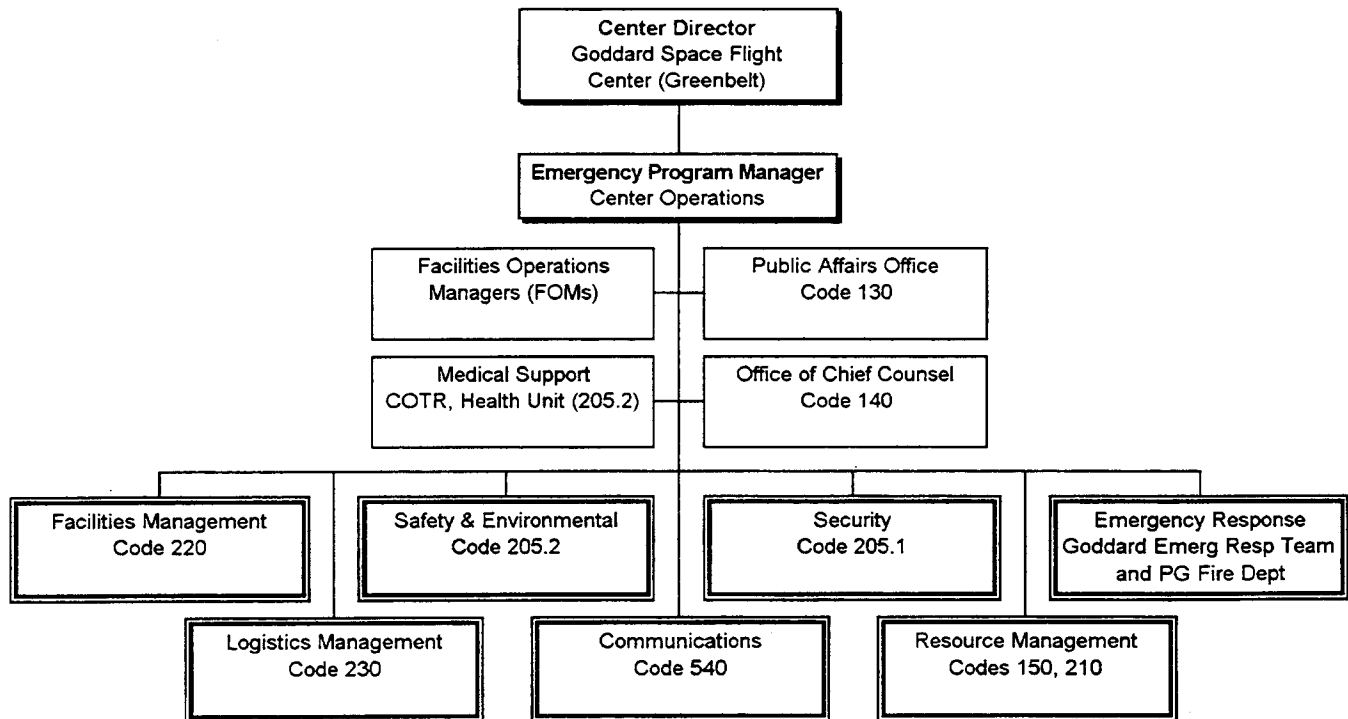
Definitions specific to GSFC/GB are designated with an asterisk (\*).

- (a) Civil Defense Emergency: An emergency declared by the President of the United States or Congress pursuant to applicable Federal law finding that an attack upon the United States has occurred or is anticipated and that national security requires the invocation of the emergency authority provided for by Federal law. (\*)
- (b) Contingency Plan: A document developed to identify and catalog all the elements required to respond to an emergency, to define responsibilities and specific tasks, and to serve as a response guide. (\*)
- (c) Decontamination: The reduction or removal of contaminating radioactive or chemical material from a structure, area, object, or person. (\*)
- (d) Direction and Control: The control group in the EOC during emergency operations consisting of the Emergency Preparedness Manager, emergency response operating service personnel, and any supporting staff such as communications, safety, medical, public affairs, and legal advisor as deemed necessary. (\*)
- (e) Drill: A supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. A drill is often a component of an exercise. (\*)
- (f) EOC - Emergency Operations Center: The Emergency Operations Center (EOC) is the designated location from which definite control of the Center is exercised and maintained during an emergency. The EOC contains an operations center, workstations for the emergency management team, conference facilities, communications,

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(2) **GSFC/GB Organizational Chart for Emergencies**



***Emergency Console (Bldg 24): Phone "112" or 6-8080***

Emergency Console has the capability to contact any Functional Group through the Functional Group's contact roster.

***(Interim) Emergency Operations Center<sup>6</sup> (EOC), Bldg. 18 Rm. 173C***

Phone: (301) 286-7443

Data/FAX: (301) 474-2187

**GSFC/GB Emergency Program Manager**

Work: (301) 286-

FAX: (301) 286-

Home: ( ) -

**Emergency Preparedness Coordinator**

Mike A. McNeill, Code 205.2

Work: (301) 286-9352

FAX: (301) 286-1789

Pager: thru Emergency Console x8080

<sup>6</sup>EOC phones/fax not available unless activated by EP Coord.



## 1. Introduction

### A. Background

The situations addressed by this *Plan* are those in which the actions of different organizations must be coordinated in an emergency to protect lives, the environment and property, and restore normal operations. This is accomplished by responding GSFC/GB organizations to manage and coordinate the use of GSFC and external resources. This major coordination effort differs from the emergencies handled on a daily basis by local fire, security, public works, and medical services personnel.

The heaviest emphasis in the past was on preparedness and response to all risks: man-made emergencies, natural disasters, and attack. Equal emphasis is now placed on mitigation and recovery to round out the four phases of comprehensive emergency management, providing a complete emergency plan for the Goddard Space Flight Center.

The Program consists of four basic levels of planning:

#### **Emergency Management Plan (EMP)**

Explains the organizational and administrative structure of the Centerwide emergency management program. Delegates responsibilities for emergency management to various organizations. The design and implementation of the EMP is the responsibility of the Emergency Management Task Group.

#### **Functional Plans**

Provide the essential and standardized control and coordination for the various Center functions utilized during an emergency, such as communications, security, or public information. Functional planning is assigned to a specific organization for Centerwide coordination and implementation.

#### **Hazard-Specific Procedures**

Provide operational and administrative procedures for unique operations related to a specific type of hazardous incident with Center impact, such as fire, utility failure, or major hazardous material spill. Hazard-specific procedures are developed and implemented by assigned organizations with specific expertise.

#### **Contingency Plans**

Provide operational procedures used by a specific organization during an emergency. Examples might include plans for spill response in a chemical

organizations and individuals identified as having responsibility for implementation. Revised pages will be dated and marked to show where changes have been made. The *Plan* will be activated at least once a year in the form of a simulated emergency in order to provide practical experience to those having EOC responsibilities.

- (5) Functional Plans and Hazard-Specific Procedures, as defined herein, shall be developed by the assigned organizations, and reviewed by the EPC. A status report on all Functional Plans and Hazard-Specific Procedures shall be provided to the Center Director as part of the annual Emergency Management Program review.
- (6) The Emergency Preparedness Manager will hold a briefing within 60 days after a new Center Director and/or Deputy Center Director is appointed to brief new officials on the *Plan*.
- (7) Periodic drills and exercises will be conducted (no less than once per year) to ensure proper functioning of this *Plan*. Proper execution of this *Plan* during a legitimate emergency will have the effect of verifying the *Plan*'s functionality and will carry the same weight as a scheduled drill or exercise. *Plan* revisions will be made as required based on "lessons learned" during debriefings with emergency responders, Facility Managers, and employees following such exercises or actual emergencies.

managed using the *Plan*, with appropriate modifications for the specific incident.

D. Emergency Situations and Potential Hazards

(1) General:

The Goddard Space Flight Center/Greenbelt is exposed to many hazards capable of potentially disrupting Center operations, causing damage, and creating casualties. Possible natural hazards include hurricanes, floods, tornadoes, fires, and winter storms. Other disaster situations could develop from a hazardous materials accident, conflagration, major transportation accident, terrorism or civil disorder. There is also the threat of a war-related incident such as nuclear, biological, chemical, or conventional attack. Additional detail is provided in the *Center's Hazard/Threat Identification Analysis* (Table I).

(2) Hazard/Threat Identification Analyses

- (a) A Hazard/Threat Identification Analysis has been completed for the Greenbelt facility as a whole. This analysis lists the likely emergency situations that may impact the Center and evaluates the overall risk associated with these potential events. In addition, the analysis identifies specific organizations responsible for leading the development of emergency management plans and procedures for the various situations listed.
- (b) The following areas are included in the Hazard/Threat Identification Analysis:
  - 1) Likelihood: Identifying the probability of a specific hazard event occurring:
    - a) Negligible: Improbable or cannot occur
    - b) Low: Can occur, but no known history
    - c) Medium: Has happened in the past
    - d) High: Happens annually or more often
  - 2) Potential Loss: Identifies the impact on the facility, Center, or Agency if hazard event occurs:
    - a) Insignificant: Minor interruption of work
    - b) Limited: Loss of workdays or temporary loss of building

- (s) Legal Counsel: An attorney from the Office of Chief Counsel will:
- 1) Be the legal advisor to activities and groups under this plan.
  - 2) Provide legal advice/assistance to management during emergency situations.
  - 3) Review documents provided by the Emergency Program Manager (EPM) or Emergency Preparedness Coordinator (EPC) where necessary to ensure compliance with the applicable laws and regulations.
- (t) Hazardous Operations: Division Chiefs of organizations which conduct hazardous operations (e.g., chemical lab, plating facility) shall complete emergency and contingency planning for their operations. This planning may include elements such as:
- 1) Conducting hazard/threat analyses; and/or
  - 2) developing detailed emergency response procedures as requested by the Emergency Management Task Group (EMTG).
  - 3) Information derived from this planning will be available for use or reference in the *"Hazard Specific Procedures."*
- (u) Mission-Critical Operations: Division Chiefs of organizations which conduct mission-critical operations (e.g., critical computers, critical lifting devices) shall complete emergency and contingency planning for their operations. This planning may include elements such as:
- 1) Conducting hazard/threat analyses; and/or
  - 2) developing detailed emergency response procedures as requested by the EMTG.
  - 3) Information derived from this planning will be available for use or reference in the *"Hazard Specific Procedures."*
- (v) Other Organizations' Responsibilities  
Other organizations not assigned a specific function in this *Plan* will be prepared to make their resources available for

Table 1: Hazard/Threat Identification Analysis -- Greenbelt Facility

Possible Hazard	Likelihood	Loss Potential	Threat (0-12)	Resp. Code	Comments
Terrorism	LOW	SIGNIFICANT	3	205.1	
Explosion/Bomb Threat	MED	SIGNIFICANT	6	205.1	
Civil Disorder	LOW	LIMITED	2	205.1	
Hostage Situation	LOW	LIMITED	2	205.1	
Tornado	MED	CATASTROPHIC	8	220	
Lightning	HIGH	SIGNIFICANT	9	220	Strike on power substation or offsite PEPCO facility
Hurricane	MED	CATASTROPHIC	8	220	
Winter Storm	HIGH/LOW	LIMITED/SIGNIF	6/3	220	Long-term storm affects fuel and PEPCO power availability
Flooding	MED	SIGNIFICANT	6	220	Interior flooding risk due to man-made sources
Fire, Structural Fire, Other	HIGH HIGH	SIGNIFICANT LIMITED	9 6	205.2	
Hazardous Materials Incident	HIGH	LIMITED	6	205.2	
Personal Injury Accident	HIGH	LIMITED	6	205.2	
Mass Casualty Incident	LOW	SIGNIF/CATAS	3/4	205.2	
Transportation Accident	MED	LIMITED	4	205.2	
Aircraft Crash (on site) Aircraft Crash (off site NASA-owned)	LOW LOW	CATASTROPHIC SIGNIFICANT	4 3	205.2	Off-site accidents (w/ NASA aircraft) east of the Chesapeake Bay will be considered under the WFF EMP
Radiological Incident	LOW	SIGNIFICANT	3	205.2	
Utility Shortage/Failure	MED	SIGNIF/CATAS	6/8	220/540	Power, telephone, radio, network, loss of site cooling water
Water Supply Fail/Contamination	LOW	SIGNIF/CATAS	3/4	220/205.2	WSSC potable water source contamination
Road/Bridge Failure	LOW	SIGNIFICANT	3	220	
Unsafe Structure (Bldg.)	LOW	SIGNIFICANT	3	220	
ADP Information Loss/Damage	HIGH	SIGNIF/CATAS	9/12	205.1	

- 6) Contact representatives by functional group to report to the EOC when activated and develop procedures for crisis training.
- 7) Develop and identify duties of on-scene Incident Command staff, use of displays and message forms, and procedures for EOC activation.
- 8) Decide when an emergency scene is safe for resumption of normal operations and inform affected management.
- 9) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 10) Prepare and maintain *Direction and Control Plan*, *Emergency Operations Center Plan*, and supporting SOP's.

(o) Human Resources: The Office of Human Resources will:

- 1) Promote ongoing hazard awareness among supervisors and management, and encourage development of employee location accountability procedures in emergencies.
- 2) Develop procedures (with Code 150) to pay salaries and benefits during extended periods when normal Center operations are interrupted.
- 3) Handle inquiries from family and relatives concerning employee injuries or fatalities.
- 4) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 5) Prepare and maintain *Human Resources Plan* and the supporting SOP's.

(p) Hazard Mitigation: The Safety and Environmental Branch will:

- 1) Notify local, State, and Federal agencies as required by law for reportable quantities.
- 2) Monitor the organization responsible for containment and cleanup of hazardous spills.
- 3) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.

- 3) Initiate their functional plans and/or hazard-specific procedures, as required.
- (d) Functional groups can be further activated or released as required to meet the requirements of EPM.

## B. Phases of Emergency Management

This *Plan* follows an approach common to any hazardous situation and acknowledges that most responsibilities and functions performed during an emergency are not hazard specific. As such, planning for each type of hazard leads to the development of a standardized emergency management system. Likewise, this *Plan* accounts for activities before and after as well as during emergency operations; consequently, all phases of emergency management are addressed below.

### (1) *Mitigation:*

Mitigation activities eliminate or reduce the probability or severity of a disaster. Also included are those long-term activities which lessen the undesirable effects of unavoidable hazards. Mitigation can include:

- (a) Identifying critical resources and facilities for protection;
- (b) Use of codes, standards, and regulations to aid in limiting "built-in" risk;
- (c) Implementing warning and/or alert systems;
- (d) Deterrent systems, such as perimeter fencing or visible security;
- (e) Active safety and training programs; and
- (f) Management decisions to mitigate risks, such as:
  - 1) quantity limitation of hazardous chemicals; or
  - 2) construction of remote hazardous facilities.

### (2) *Preparedness:*

Preparedness activities develop the necessary and critical response capabilities needed before an emergency event arises. Planning and training prior to an emergency are primary activities conducted under this phase. Preparedness can include:

- (a) Hazard/threat identification and analysis (Table 1).
- (b) Contingency plans.
- (c) Implementation of post-incident evaluation and corrective action plans [see also 2.B.(4)(b), below].
- (d) Annual review and exercise requirements.

(j) Emergency Public Information The Office of Public Affairs will:

- 1) Promote ongoing hazard awareness through employee communication programs.
- 2) Compile and prepare emergency information for the media in case of emergency.
- 3) Arrange for media representatives to receive regular briefings on the Center status during extended emergency situations.
- 4) Coordinate with Code 250 or others to acquire printed and photographic documentation of the disaster situation.
- 5) Handle inquiries from the media and the public.
- 6) Coordinate transportation through the Logistics Management Division for media when appropriate.
- 7) Prepare and maintain *Emergency Public Information Plan* and the supporting *SOP's*.

(k) Damage Assessment: The Facilities Management Division will:

- 1) Establish a damage assessment team from among Center resources with assessment capabilities and responsibilities.
- 2) Provide a skilled damage assessment team to EOC.
- 3) Establish systems for reporting and compiling information on dollar damage to facilities and private property.
- 4) Assist in determining extent of damaged area.
- 5) Compile cost estimates of damage repairs for use by Center officials in requesting funds.
- 6) Condemn unsafe structures.
- 7) Evaluate the effect of damage on Center facilities and facilitate long-range recovery planning.
- 8) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 9) Prepare and maintain *Damage Assessment Plans* and supporting *SOP's*.

(l) Utilities: The Facilities Management Division will:

- 1) Barricade hazardous areas.
- 2) Restore streets and bridges in priority order.



C. External Support and Resources

- (1) Support: Requests for local, State or Federal assistance, including the military services, will be made by the Center Director or designee.
- (2) Agreements and Understandings: Should local resources prove to be inadequate during an emergency, requests will be made for assistance from other local jurisdictions and other agencies in accordance with existing or emergency negotiated *Mutual Aid Agreements* and understandings. Such assistance may take the form of equipment, supplies, personnel or other available capabilities. Every reasonable effort should be made to anticipate the need for agreements or understandings in advance of an emergency whose favorable outcome could be influenced by such preplanning. All agreements will be entered into by duly authorized officials and will be formalized in writing whenever possible. Each office, directorate, or facility with emergency response assignments is responsible for the activities conducted within their respective jurisdictions, including the preparation and coordination of functional plans, hazard-specific procedures, support arrangements and mutual aid agreements associated with this Plan.

D. Organization and Assignment of Responsibilities

- (1) General:  
The Center Director is responsible for emergency management planning and operations within the Goddard Space Flight Center, including its off-site operations. The GSFC/GB Emergency Preparedness Manager (EPM) is responsible for implementing, maintaining, and improving emergency management at the Center. The Safety, Environmental, and Security Office (Code 205) has primary responsibility for daily operations in emergency management and response. In addition, each building and facility at GSFC/GB will have an assigned Facility Operations Manager (FOM) who will ensure that emergency management procedures are developed and maintained for the organizations housed in their respective buildings. This integrates directly with each Division's Safety Plan and emergency planning efforts. In order to coordinate emergency planning and response, an Emergency Management Task Group and an Emergency Response Team have been established, and their specific functions are summarized below. A diagram of how GSFC/GB is organized for emergencies is contained in *Attachment (2)*.

- 2) Under fallout conditions, provide senior management with information on fallout rates, fallout projections, and allowable doses.
- 3) Coordinate radiation monitoring throughout the Center.
- 4) Coordinate monitoring services and advice at the scene of accidents involving radioactive materials.
- 5) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 6) Prepare and maintain *Radiological Protection Plan* and the supporting *SOP's*.

(f) Evacuation: The Emergency Preparedness Coordinator will:

- 1) Identify high hazard areas and number of potential evacuees.
- 2) Coordinate evacuation planning with FOM's to include:
  - a) Movement control
  - b) Health/medical/disabled requirements
  - c) Physically challenged or disabled employees
  - d) Transportation needs
  - e) Emergency Public Information materials
  - f) Shelter/Reception
- 3) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 4) Prepare and maintain *Center Evacuation Plan* and the supporting *SOP's*.

(g) Fire Prevention and Control: The Safety and Environmental Branch will:

- 1) Provide a fire prevention plan.
- 2) Implement a fire response program.
- 3) Inspect damaged area for fire hazards.
- 4) Inspect shelters for fire hazards.
- 5) Coordinate search and rescue activities.
- 6) Maintain a reserve pool of personnel and equipment for rescue purposes.
- 7) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.

responsible for emergency planning and coordination of building evacuations. A listing of Facility Manager responsibilities is given in GMI 7234.2, "Facility Operations Managers." A current list is available in the GSFC Telephone Directory.

(d) *GSFC/GB Employees*

Employees at GSFC/GB are critical to the immediate response to any emergency. As such, employees assist in emergency management by:

- 1) Participating in the development and implementation of contingency and evacuation plans for buildings or operations where they work;
- 2) Coordinating their plans with other workgroups near their worksite;
- 3) Participating in training on their contingency and evacuation plans to ensure a workable plan within the workgroup;
- 4) Validating the effectiveness of plans and training through the use of drills and other exercises coordinated through the EMTG.

(e) *Contractors*

Contractors doing business with GSFC, particularly those with employees who work on site, are "employers" with respect to 29 CFR 1910.38, "Employee Emergency Plans and Fire Prevention Plans." As such, Contracting Officers and COTR's shall monitor on-site contractors' performance to ensure compliance with 29 CFR 1910.38 and the "Emergency Evacuation Procedures" contract clauses<sup>1</sup>.

(3) Program Management Responsibilities

(a) The Emergency Program Manager<sup>2</sup> is primarily responsible for:

- 1) Developing emergency policy.

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<sup>1</sup>The current clause reference is NFS 18-52.237-70.

<sup>2</sup>The Chair of the Safety and Environmental Steering Committee serves as the Emergency Program Manager for GSFC/Greenbelt, per GMI 1040.5.

## Emergency Management Functional Responsibilities

Plan Reference Letters																				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Center Operations	S	S	S	S																
Emergency Planning	P	S	S	S																
Security (205.1)		S	S	S																
Safety and Environmental (205.2)	S	S	S	S																
Facilities Management (220)		S	P	S																
Medical Officer (205.2)				S																
Public Affairs (130)	S	S	S	P																
Human Resources (110)																				
Logistics Management (230)																				
Communications Officer (540)	S	P	S	S																
Radiation Safety Chair (205.2)																				
Comptroller (150)	S																			
Procurement (210)	S																			
Chief Counsel (140)																				

P = Primary Responsibility  
S = Support Responsibility

Table 2, "Emergency Management Functional Responsibilities"

- 6) Analyzing the emergency skills needed by the Center and identifying the training necessary to provide those skills.
- 7) Preparing and maintaining a resource inventory.
- 8) Apprising the Emergency Program Manager and the Management Operations Director of preparedness status and anticipated needs.
- 9) Coordinating the identification, preparation, and implementation of *Mutual Aid Agreements* from emergency functional groups.
- 10) Serving as day-to-day liaison between the Center and local emergency management organizations.
- 11) Maintaining liaison with organized emergency volunteer groups and private agencies.
- 12) Preparing and maintaining *Evacuation Plan, Training Plan, Index of Hazardous and/or Critical Facilities Hazard Analyses*, and the supporting *SOP's*.

(4) Functional Responsibilities

(a) General

- 1) Team leaders for each functional group within this section are activated by the EPM and report through the Emergency Operations Center.
- 2) Specific responsibilities are assigned given the need for a single point of contact/responsibility during an emergency, but recognizing that the routine activities of more than one organization may be applicable to a particular function. As such, the functional group Team Leader serves as an "umbrella" manager/ coordinator for all organizations providing that function.
- 3) Table 2, "Emergency Management Functional Responsibilities," summarizes the functional areas of emergency management with primary and secondary responsibilities.

(b) Warning/Alerting: The Operations and Maintenance Branch will:

- 1) Disseminate emergency information as requested.
- 2) Receive and disseminate warning information to employees and senior management, as requested.

- 2) Directing the overall preparedness program for the Center.
- 3) Activating the Emergency Operations Center (EOC), when there is an appropriate threat.
- 4) Serving as the management representative to 130/Public Affairs for the purpose of informing the Center Director/management, employees, contractors, news media and the community of the situation (with the assistance of 110/Human Resources).
- 5) Supporting the overall preparedness program in terms of its budgetary and organizational requirements.
- 6) Implementing the policies and decisions of the Center Director or designee<sup>3</sup>.
- 7) Coordinating long-range recovery after a disaster.
- 8) Initiating and monitoring the increased readiness actions among Center services when disaster threatens (refer to "*Increased Readiness Conditions Procedures*").

(b) The Emergency Preparedness Coordinator<sup>4</sup> is responsible for:

- 1) Preparing and maintaining this *Plan* and ensuring that all Center elements develop, maintain, and exercise their respective plans, Standard or General Operating Procedures, or company implementation of this *Plan*.
- 2) Developing *Standard Operating Procedures (SOP's)* to identify critical resources and personnel for dispersment during an emergency.
- 3) Serving as staff advisor to the Emergency Program Manager on emergency matters, and assuming EPM duties during their absence.
- 4) Coordinating the planning and general preparedness activities of the Center, and maintaining this *Plan*.
- 5) Providing advice and assistance to Center elements and contractors regarding emergency management, response, and planning.

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<sup>3</sup>The management "chain of command" from the Center Director is contained in NHB 1101.3, "NASA Organization" and SOP's established by each department.

<sup>4</sup>A member of the Safety, Environmental, and Security Office (Code 205) serves as Emergency Preparedness Coordinator (EPC), per GMI 1040.5.

- 3) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 4) Prepare and maintain *Warning/Alerting Plan* and the supporting SOP's. -

(c) Communications: The NASCOM Communications Manager will:

- 1) Establish and maintain an emergency communication system.
- 2) Coordinate use of all public and private communication systems necessary during emergencies).
- 3) Manage and coordinate all emergency communication operations of the Emergency Operations Center (EOC) once it is activated.
- 4) Assess damage to communication systems and coordinate repair and restoration with NASA Communications Division and Facilities Management Division, or through existing contractor support.
- 5) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 6) Prepare and maintain *Communications Plan* and the supporting SOP's.

(d) Shelter and Mass Care: The Safety and Environmental Branch will:

- 1) Develop criteria and resource requirements for shelter and mass care, coordinating directly with the Logistics Management Division.
- 2) Identify emergency shelter locations.
- 3) Coordinate special care requirements for sheltered groups such as handicapped persons, unaccompanied children, the aged, and others.
- 4) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 5) Prepare and maintain *Shelter and Mass Care Plan* and the supporting SOP's.

(e) Radiation Safety: The Chairperson, Radiation Safety Committee will:

- 1) Establish and maintain a radiation monitoring program.

(2) Responsible Organizations

(a) *Emergency Management Task Group*

The *Emergency Management Task Group* (EMTG) includes offices and directorates who have emergency planning responsibilities for all of the Goddard Space Flight Center/Greenbelt. Each organization is responsible for emergency planning activities conducted within their respective specialties, including the preparation and coordination of functional plans, hazard-specific procedures, support arrangements and mutual aid agreements. In addition, the EMTG will develop, coordinate, and implement the facility's Emergency Management Program, including the EMP and associated documents. The members of the *Emergency Management Task Group* include representatives from each Directorate, Facilities Management Division, Office of Public Affairs, Office of Chief Counsel, Office of Human Resources, and others who may be called upon in a specific situation.

(b) *Goddard Emergency Response Team (GERT)*

This group, based in the Safety, Environmental, and Security Office, includes individuals representing those services required for an effective emergency response program. These services include emergency medical, fire, hazardous material, and specialized rescue responses. The GERT coordinates directly with Prince George's Fire Department resources and command structure, providing them emergency access to all necessary Center information and resources. During an emergency, the GERT, as well as other GSFC/GB resources, are directed by the Emergency Preparedness Manager through the EOC. In the absence of the EPM and EPC, their duties will be assumed by the GERT. During incidents not requiring EOC activation, the GERT coordinates Center resources utilized in hazard mitigation.

(c) *Facility Operations Manager (FOM)*

A Facility Operations Manager is a NASA employee who serves as a single point of contact for matters related to a given building or workplace. FOM's are appointed at the directorate level with the objective of ensuring that every GSFC/GB workplace has a single, well-trained, individual responsible for all activities that could affect the safety of the facility, its contents, and its occupants. FOM's are generally



- 8) Prepare and maintain *Fire and Rescue Plan*, *Fire and Explosion Procedure*, *GERT Standard Operating Procedures*, and the supporting *SOP's*.

(h) Security: The Security Branch will:

- 1) Provide security, traffic control, and crowd control during an emergency incident.
- 2) Isolate damaged areas.
- 3) Report on damaged areas.
- 4) Evacuate non-essential personnel from incident area and/or the Center as required.
- 5) Monitor daily security activities and situations to mitigate potential vulnerabilities.
- 6) Provide direct liaison with the NASA Inspector General and law enforcement agencies during emergency operations.
- 7) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 8) Prepare and maintain *Security Plan*, *National Security Plan*, *Security Procedure*, and the supporting *SOP's*.

(i) Medical and Occupational Health Services: The COTR, Medical/Industrial Hygiene Services Contract will:

- 1) Coordinate planning efforts of the clinic and other health facilities with Center planning requirements.
- 2) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 3) Coordinate triage and first aid activities immediately after disaster strikes, including EMS.
- 4) Coordinate medical transportation requirements with responding EMS units, including a staging area for ambulances and medical service resources pending assignment.
- 5) Develop emergency health and sanitation standards and procedures.
- 6) Provide air monitoring to provide clearance for re-occupancy following a hazardous materials release.
- 7) Develop systems for reporting and compiling information on deaths and injuries.
- 8) Prepare and maintain *Health and Medical Plan* and the supporting *SOP's*.

- (e) Equipment, facility, budget, and supply requirements.
- (f) Identification of coordination requirements with Federal, State, and local plans.
- (g) Education and awareness training.

(3) *Response:*

Response includes the actions taken by emergency services during an incident or crisis. These activities help to reduce casualties and damage and speed recovery. Response activities include warning, evacuation, rescue, and other similar operations, and may include:

- (a) Activation of Emergency Response Teams.
- (b) Activation of Emergency Operations Center (EOC), and/or alternate EOC.
- (c) Exercises and drills.
- (d) Use of Incident Command System (ICS).
- (e) Coordination with local, State, and Federal agencies.
- (f) Recall and notification of key personnel.
- (g) Damage assessment.

(4) *Recovery:*

Recovery is both a short- and long-term process. Short-term operations restore vital services to the Center. Long-term recovery restores the Center to normal operations. The recovery period is also an opportune time to institute mitigation measures, especially those related to the current or anticipated future emergencies. Recovery requirements may include:

- (a) Those activities necessary to ensure the short- and long-term continuance/recovery of the NASA Installation or critical missions. Examples include restoration of vital communications services, damage assessment, temporary relocation of offices disrupted due to structural damage, and reconstruction of damaged areas.
- (b) Provide mitigation and preparedness data [see also 2.B.(2)(c), above].
  - 1) Lessons Learned/Corrective Actions Plan
  - 2) After-Action Reports
  - 3) Damage Assessment (short term)
  - 4) Recovery Actions (long term).
- (c) Ensure appropriate reporting on expenditures to NASA Headquarters Office of the Chief Financial Officer/Comptroller, Code B.

- 3) Protect and/or restore waste treatment and disposal systems.
- 4) Augment sanitation services.
- 5) Assist in assessing damage to streets, bridges, traffic control devices, waste water treatment system, and other facilities.
- 6) Remove debris.
- 7) Restore electrical service to vital facilities.
- 8) Direct temporary repair of essential facilities.
- 9) Restore emergency power sources as required.
- 10) Restore water treatment and supply services.
- 11) Determine recovery times of affected utility systems.
- 12) Monitor design and construction activities with regards to mitigating potential vulnerabilities through the prudent use of codes, standards, and regulations.
- 13) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 14) Prepare and maintain *Utilities Control Plan*, the *Hurricane/Severe Weather Procedure*, the *Utility Interruption Procedure*, the *Snow Emergency Procedure*, and supporting *SOP's*.

(m) Resource Management: The Office of the Comptroller will:

- 1) Develop procedures for establishment of emergency procurement, delegation of procurement authority, and/or a disaster contingency funding.
- 2) With assistance from Codes 210 and 230, maintain records of emergency-related expenditures for purchases and personnel.
- 3) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
- 4) Prepare and maintain *Resource Management Plan* and the supporting *SOP's*.

(n) EOC/Direction and Control: The Emergency Preparedness Coordinator will:

- 1) Direct and control local operating forces.
- 2) Maintain contact with neighboring EOC's.
- 3) Maintain EOC in an operating mode at all times or be able to convert EOC space into an operating condition.
- 4) Ensure the operational capability of the EOC.
- 5) Control the EOC during its activation.

## 2. Emergency Management

### A. Concept of Operations

#### (1) General:

It is the responsibility and intent of Center management to protect life, the environment, and property from the effects of hazardous events. Management Operations Directorate (200) has the primary responsibility for emergency management activities. This *Plan* is based on the concept that the emergency functions for various agencies/organizations involved in emergency management will generally parallel normal day-to-day functions. To the extent required, activities which do not contribute directly to addressing an emergency will be curtailed and associated personnel and material resources redirected to meet the immediate needs of any emergency situation. The efforts that would normally be required for those functions will be redirected to the accomplishment of emergency tasks by the element concerned.

#### (2) Operational Scenario:

The emergency management of a hypothetical emergency incident might proceed as follows:

(a) Goddard Emergency Response Team (GERT) provides initial response and assessment

(b) If, in the opinion of Emergency Program Manager (EPM), the incident is beyond the resources available on the scene, they will:

- 1) Activate the Emergency Operations Center (EOC) in its entirety; or
- 2) Activate specific functional groups, if only one or two are required; and
- 3) Ensure that Center management is informed of emergency status.

(c) In either of the activations above, necessary functional groups:

- 1) Will be contacted by phone (or radio, if available) by Emergency Preparedness Coordinator (EPC);
- 2) Will provide a continuous contact phone/fax number, or report to a requested location; and

- 4) Prepare and maintain the *Hazard Mitigation Plan and Spill Prevention, Control, and Countermeasures Plan*<sup>5</sup> and the supporting SOP's.
- (q) Logistical Services: The Logistics Management Division will:
- 1) Identify local transportation resources and arrange for their use in emergencies.
  - 2) Coordinate deployment of transportation equipment to Center facilities requiring augmentation.
  - 3) Establish and maintain a pool of drivers, mechanics, parts, and tools.
  - 4) Ensure availability of fuel and oil for vehicles and power generation equipment under emergency conditions.
  - 5) Provide supply support for emergency operations through "store stock," Center resources, or outside sources.
  - 6) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
  - 7) Prepare and maintain *Logistics, Transportation, and Supply Support Plan* and the supporting SOP's.
- (r) Training: The Emergency Preparedness Coordinator will:
- 1) Ensure the development of mandatory training and certification programs for appropriate GSFC/GB personnel.
  - 2) Develop and maintain a system of disaster drills, including a system for debriefing all emergency incidents and exercises for "lessons learned" and reporting the results.
  - 3) Coordinate emergency preparedness training programs with the Human Resources Office and NASA Safety Training Center to avoid redundant efforts and to ensure proper scheduling of required training and that records are maintained.
  - 4) Identify, prepare, and implement *Mutual Aid Agreements* with outside jurisdictions as required.
  - 5) Prepare and maintain *Training Plan* and the supporting SOP's.

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<sup>5</sup>While this is a "procedure" with respect to the EMP, the name of the procedure is specified by statute as a "plan."

- c) Significant: Fatality or loss of building
- d) Catastrophic: Loss of capability to perform Center or Agency mission

- 3) Threat Ranking: Identifies the relative importance of the listed threats, based upon their likelihood and potential loss. Threat ranking uses the following matrix:

▼Likelihood	Potential Loss			
	Insignificant	Limited	Significant	Catastrophic
Negligible	0	0	0	0
Low	1	2	3	4
Medium	2	4	6	8
High	3	6	9	12

#### E. Assumptions

- (1) GSFC/GB has continuous exposure to the hazards noted above, as well as others which may develop in the future.
- (2) Outside assistance will be available in most emergency situations affecting the Center. Although this *Plan* defines procedures for coordinating such assistance, GSFC/GB should be prepared to carry out initial disaster response and short-term actions on an independent basis.
- (3) Major disasters can occur at any time and at any place on the Center. In some cases, dissemination of warning and increased readiness measures may be possible. However, many disasters and events can occur with little or no warning.
- (4) Senior management officials recognize their responsibilities for the safety and well-being of employees and the public and will assume their responsibilities in the implementation of this *comprehensive emergency management plan*.
- (5) Proper implementation of this *Plan* will reduce or prevent injury to people, loss of life, damage to the environment and/or facilities/equipment, and loss of designated function.

emergency duty at the direction of the Center Director or designee.

E. Administration

- (1) Reports and Records: Required reports will be submitted to the appropriate authorities in accordance with individual *Plans*.
- (2) Disaster Assistance: All individual relief assistance will be provided in accordance with the policies set forth in NASA and Federal provisions.
- (3) Protection of Vital Records:  
Vital records must be protected to ensure the continued functioning of an organization during and after an emergency and to protect the rights and interests of the organization and the individuals affected by it. Vital records include emergency operating records, such as emergency management plans, and rights and interests records, such as personnel and payroll records. NMI 1440.5, "NASA Vital Records Program" and GMI 1440.5, "Vital Records Program," establish policy and responsibilities regarding the designation, maintenance, and protection of NASA-owned vital records. Further information on protection and preservation of vital official records can be obtained from the GSFC Records Manager in Code 239.

F. Plan Development and Maintenance

- (1) The Emergency Preparedness Manager will brief appropriate senior management and Center officials concerning their roles in emergency management and ensure proper distribution of the *Plan* and changes to the *Plan*.
- (2) All organizations will be responsible for the development and maintenance of their respective *Plans* and *SOP*'s identified in *SECTION 2.D., Organization and Assignment of Responsibilities*.
- (3) The Emergency Preparedness Manager will be responsible for ensuring that an annual review of the *Plan* is conducted by all officials involved and that the *Plan* is recertified biennially by the Center Director.
- (4) The *Plan* will be updated, as necessary, based upon deficiencies identified by drills and exercises, changes in local management structure, technological changes, etc. Approved changes will be incorporated into the *Plan*, and changes will be forwarded to all

lab, power loss in a test facility, or cooling failure in a computer facility. Contingency planning is the responsibility of the organization(s) directly involved.

This plan incorporates NMI 1040.3, "Emergency Preparedness Program" and GMI 1040.5, "GSFC Emergency Management Program." This plan supersedes and updates the following documents:

- GHB 1040.1D, "Emergency Preparedness Plans and Procedures, Volume 1," dated September 1979 (rescinded 1995).
- GHB 1040.2A, "Emergency Preparedness Plans and Procedures, Volume 2," dated April 1980 (rescinded 1995).

Many of the existing plans and procedures referenced in this document are outdated, and will be revised in the near future. If you have questions, contact the GSFC/GB Emergency Preparedness Coordinator (Code 205.2).

This *Emergency Management Plan* was developed by the Goddard Space Flight Center/Greenbelt (GSFC/GB) Emergency Management Task Group (EMTG), and represents the variety of emergency management concerns of Center organizations.

## B. Purpose

The purpose of this *Plan* is to manage the effects of an emergency on the mission and resources of NASA and GSFC/GB. This *Plan* seeks to *mitigate* the effects of a hazard, to *prepare* measures to be taken which will preserve life and minimize damage, to *respond* during emergencies requiring the use of GSFC/GB resources and provide necessary assistance, and to establish a *recovery* system in order to return the Center to normal operations after a natural disaster, technological accident, attack, war, or other major incident.

## C. Scope


- (1) This *Plan* focuses primarily on the management and utilization of Center resources in an emergency. At the same time, the *Plan* provides the ability for Center personnel to access and obtain resources and assistance from other sources.
- (2) This *Plan* is based on the probable impact from a "single-fault" incident, such as a fire or utility failure. "Multiple-fault" incidents (e.g., simultaneous water supply failure and building fire) can be



**G. Attachments to Basic Plan**

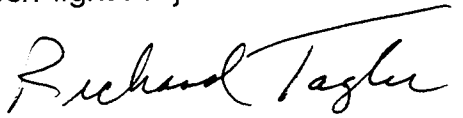
- (1) Authorities and References
- (2) GSFC/GB Organizational Chart for Emergencies
- (3) GSFC/GB Site Maps
- (4) Definition of Terms
- (5) Organization Concurrence

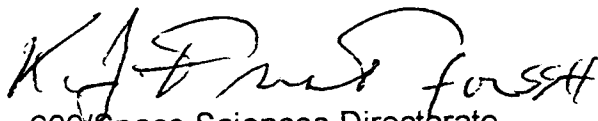
(5) Organization Concurrence

  
for 200/Management Operations  
Directorate

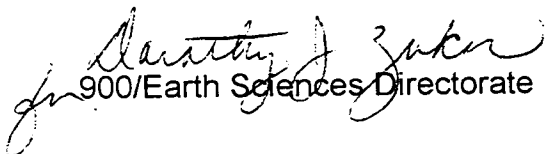
  
300/Office of Flight Assurance

  
400/Flight Projects Directorate

  
500/Mission Operations and Data  
Systems Directorate

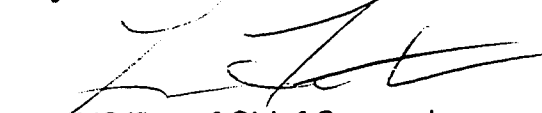
  
600/Space Sciences Directorate

  
700/Engineering Directorate

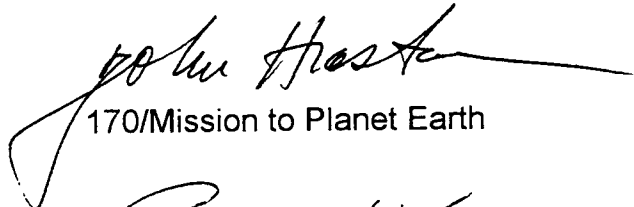
  
for 900/Earth Sciences Directorate

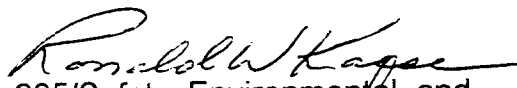
  
for 110/Office of Human Resources

  
130/Office of Public Affairs

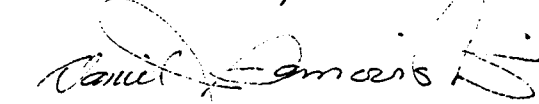
  
140/Office of Chief Counsel

  
for 150/Office of the Comptroller

  
170/Mission to Planet Earth

  
205/Safety, Environmental, and  
Security Office

  
220/Facilities Management Division

  
Office of the Inspector General

(1) **Authorities and References**

**National Aeronautics and Space Administration (NASA) Headquarters Policy Documents:**

NHB 1101.3, "NASA Organization" .....	12
NMI 1040.3, "Emergency Preparedness Program" .....	2, A-6, A-7, A-9
QS-EPP-95-001, "NASA Emergency Preparedness Plan" .....	A-6-A-8

**NASA/Goddard Space Flight Center Policy Documents:**

GMI 1040.5, "GSFC Emergency Management Program" .....	2, 11, 12
GMI 1440.5, "Vital Records Program" .....	23
GMI 7234.2, "Facility Operations Managers" .....	11

**Statutes and Applicable Regulations:**

"Robert T. Stafford Disaster Relief and Emergency Assistance Act" (P.L. 93-288, 42 USC 5173) .....	A-6
29 CFR 1910.38, "Employee Emergency Plans and Fire Prevention Plans" .	11
44 CFR 205, "Federal Disaster Assistance" .....	A-6

the amount of chemical at a facility or in a transport container poses a threat to the surrounding community. (\*)

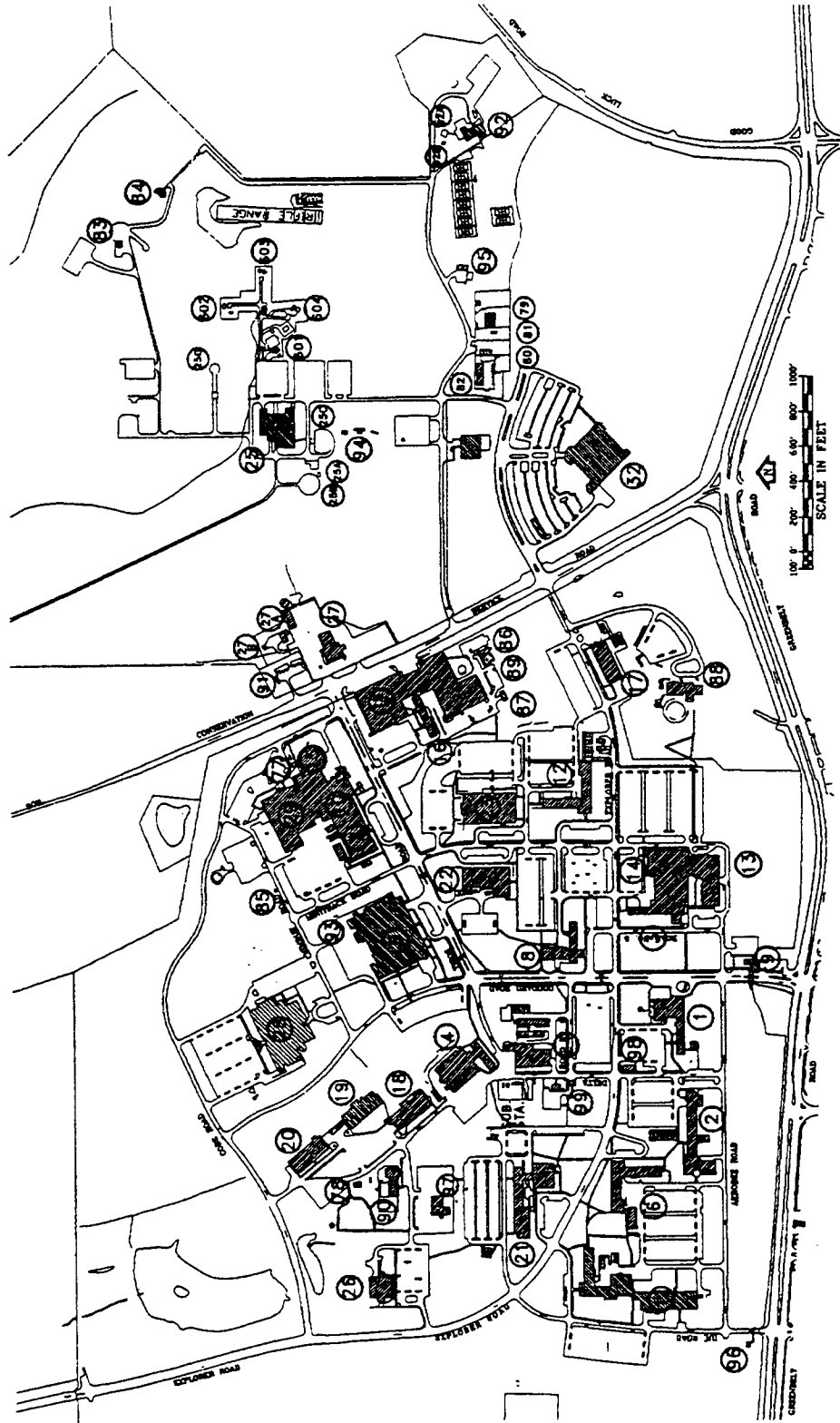
- (m) HAZMAT - Hazardous Materials: Chemicals which are explosive, flammable, poisonous (including radioactive), corrosive, or reactive, and require special care in handling because of the hazards they pose to public health and the environment<sup>7</sup>. (\*)
- (n) Key Personnel: Those officials of the Center, local government and other agencies and organizations who have primary functional responsibilities. (\*)
- (o) Mutual Aid Agreements: Arrangements between organizations, either public or private, for reciprocal aid and assistance in case of disasters too great to be dealt with unassisted. (\*)
- (p) National Security Emergency: Any event that seriously degrades or threatens the national security of the United States. (NMI 1040.3)
- (q) On-Scene Command Post: Facility at a safe distance from an accident site where the incident commander, responders, and technical representatives can make response decisions, deploy manpower and equipment, maintain liaison with the media and handle communications. (\*)
- (r) Operations Planning: The process of determining the need for application of resources and determining the methods of obtaining and committing these resources to fill the operational needs. (\*)
- (s) SOP - Standard Operating Procedure: A ready and continuous reference to those procedures which are unique to a situation and which are used for accomplishing specialized functions. (\*)
- (t) Vulnerability (or Risk): The degree to which people, property, the environment or social and economic activity --

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<sup>7</sup>Several statutory definitions exist for materials which pose a risk to health or the environment. These include, but are not limited to, OSHA [29 CFR 1910.120(a)(3)], EPA [40 CFR 302.4 and 355 Appendix A], and DOT [49 CFR 171.8].

(3)

# GODDARD SPACE FLIGHT CENTER MAIN AND EAST CAMPUS LOCATION MAP



data processing, and executive aids such as computers, facsimile machines, modems, etc. (QS-EPP-95-001)

- (g) Emergency: A sudden, generally unexpected event which does or could cause harm to people, the environment, resources, property, or institutions. Emergencies may range from local to national events and may result from natural or technological factors or human actions. (NMI 1040.3)
- (h) Emergency Public Information: Information which is disseminated before, during, and/or after an emergency which instructs and transmits direct information and/or instructions to the employees and/or the public via the news media. (\*)
- (i) Exercise: An activity designed to promote emergency preparedness; test or evaluate emergency management plans, procedures, or facilities; train personnel in emergency response duties; and demonstrate operational capability. There are three specific types of exercises:
  - 1) Tabletop Exercise: An activity in which elected and appointed officials and key Agency staff are presented with simulated emergency situations without time constraints. It is usually informal, in a conference room environment, and designed to elicit constructive discussion by the participants as they attempt to examine and then resolve problems based on existing emergency operating plans. The purpose is for participants to evaluate plans and procedures and to resolve questions of coordination and assignment of responsibilities in a non-threatening format and under minimum stress.
  - 2) Functional Exercise: An activity designed to test or evaluate the capability of an individual function or complex activity within a function. It is applicable where the activity is capable of being effectively evaluated in isolation from other emergency management activity.

(Example) A Direction and Control Functional Exercise: An activity designed to test and evaluate the centralized emergency operations capability and timely response of one or more units of government under a stress environment. It is centered in an